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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,140	09/26/2001	Jerome L. Elkind	TI-33085	6252

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EXAMINER
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SIEFKE, SAMUEL P

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/965,140

Applicant(s)

ELKIND, JEROME L.

Examiner

Samuel P. Siefke

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 14-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-18, 20-24, 26-28, 32 and 36-41 is/are rejected.
- 7) ☒ Claim(s) 19, 25, 29-31, 33-35, 42-44 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims **14-18,20-24,26-28,32,36** are rejected under 35 U.S.C. 102(b) as being anticipated by Yalvac et al. (USPN 5,310,526).

Yalvac discloses a chemical sensor (10) that comprises a cavity defined by two openings where two porous plugs seal (col. 1, lines 54-67) the openings to create the cavity (fig.1 ref. 13). A pressurized sample is flowed through one porous plug into the cavity while a pressurized reagent is flowed through the other porous plug into the cavity. A component of interest in the sample reacts with a reactive component of the reagent in the cavity to produce a reaction product. The reaction product is then analyzed in the cavity by, for example, absorption spectroscopy (optical based, col. 3, line 55- col. 4, line 37)). An ultra sonic vibrator (fig. 1 ref. 24; col. 3, lines 31-42) is attached to the body to enhance mixing of the reagent and sample in the cavity.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim **37-41** is rejected under 35 U.S.C. 103(a) as being unpatentable over Yalvac et al. (USPN 5,310,526) in view of Sunshine (USPN 6,085,576).

Yalvac discloses a chemical sensor as can be seen above.

Yalvac does not teach a data processing device, a data input device, an algorithmic software directing the data processing device, a wireless communications link, or a transmitter.

Sunshine teaches a handheld sensing apparatus that comprises a processor having a data input device, a keypad for entering data, an algorithmic software that directs the data processing device, communication links and a transmitter (col. 13, lines 32-col. 15, line 29) in order to facilitate on site display of detection results, as well as transmission to another interested user. It would have been obvious to one having an ordinary skill in the art to modify Yalvac to incorporate a data processor for analyzing data collected in order to be able to analyze more samples and store data on a backup system. It would have been obvious to modify Yalvac to incorporate a data transferring

device like that of Sunshine to transmit data through wireless communication to data stations to keep real time monitoring of in line systems.

### ***Allowable Subject Matter***

Claims 19, 25, 29, 30, 31, 33, 34, 35, 42-44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. These claims would be allowable because the prior art does not teach or fairly suggest using a sealing means as suggest by the above claims nor does the prior art teach embedding a secondary reagent in the sample chamber or sealing element.

### ***Response to Arguments***

Applicant's arguments filed 1/5/05 have been fully considered but they are not persuasive. Applicant argues, "it is necessary that the analyte be in fluid contact with the sensor surface and the purpose of the agitation is therefore to cause the analyte to travel to the sensor surface. No such feature is taught or even remotely contemplated by Yalvac." Yalvac discloses a chemical sensor that comprises a cavity where a sample and reagents are combined to produce a reaction mixture, then the contents are detected by absorbance spectroscopy. Light shines through the cavity to a lens (40) which in turn goes to the detector (39). Clearly this is a sensor with a sensor surface. Further, claim 1 only requires a biosensor having a sensor surface, said biosensor detecting properties of a given sample analyte at said sensor surface. A surface as

defined by Webster's Ninth New Collegiate Dictionary is, "the exterior or upper boundary of an object or body... of, located on, or designed for use at the surface of something." Since Yalvac is a chemical sensor, the inner surface of the cavity 13 is a surface, therefore a sensor surface is created. With respect to the argument, "There is no provision or need to steer the analyte to the sensor surface for the purpose of detection of the sample at the sensor surface." The sample analyte of Yalvac takes up the entire space in the cavity, therefore the analyte is in fluid communication with the sensor surface of Yalvac as defined above where detection of an analytes property can be detected.

Applicant argues, "a fluid compartment for retaining therein an analyte." Yalvac discloses a fluid compartment for retaining therein an analyte, and the fluid compartment is in fluid communication with the biosensor (col. 2, line 66- col. 3, line 3).

Applicant argues, "no such feature is taught or suggested by Yalvac". This regarding the miniature electro-mechanical vibration device to vigorously shake the fluid compartment to enhance mass transport of analyte to the sensor surface. It is noted that the Applicant recites limitations on the manner in which the miniature electro mechanical vibration device is used. Such limitations are not attributed patentable weight in claims directed to a device. Further, Yalvac discloses that the contents of the reaction space are mixed, by vibration, so that the sample and their reagent moved into the reaction space are more rapidly co-mingled together (col. 4, lines 29-31). As stated above the sample mixture of Yalvac takes up the entire space of the cavity.

Applicant argues, "it should be noted that the device as claimed is a portable device. This clearly brought out in the preamble to the independent claims. Yalvac is clearly not portable and, in fact, is demonstrated to be affixed to the wall of a chemical reactor." Yalvac states the sensor 10 is attached to the wall of a chemical reactor 11 by bolts 19. It is inherent that without the bolts that are used to affix the sensor to the wall of the reactor the sensor is in a free state and would be portable. Further, to state that something is portable is indefinite, for example if the sensor is big it might need to be loaded by a truck, but it is still portable because it can be moved. Webster's Ninth New Collegiate Dictionary defines portable as "capable of being carried or moved about" Yalvac sensor is clearly portable by the definition and as seen in figure 1 by the bolts used to attach the sensor to the wall of the reactor.

Applicant argues, "claim 16 further limits claim 14 by requiring that the fluid compartment be configured to receive a liquid sample having an analyte suspended or dissolved therein." The Examiner would like to point to col. 2, lines 15-17 where Yalvac states "the first step is to move a fluid sample through a first porous member into a reaction space, the sample containing a component of interest." This clearly states that the component of interest is either suspended or dissolved within the sample fluid.

An optically based miniaturized sensor is what Yalvac specifically teaches.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel P. Siefke whose telephone number is 571-272-1262. The examiner can normally be reached on M-F 7:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on 571-272-1700. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.




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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sam P. Siefke

June 29, 2005

  
**YELENA GAKH**  
**PRIMARY EXAMINER**